SEQUENCE LISTING

<110> MOLINERO, ANA ISABEL SANZ

<120> PLANTS HAVING MODIFIED GROWTH CHARACTERISTICS AND A METHOD FOR MAKING THE SAME

<130> 4982-5

<140> 10/537,897
<141> 2005-06-07

<150> PCT/EP03/51104
<151> 2003-12-24

<150> EP 02080654.3
<151> 2002-12-24

<160> 52

<170> PatentIn version 3.5

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<213> Arabidopsis thaliana

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gcttctcgct cgcgacaacc gtcagcctcc tcctcctccg gcggtggaga agttgagcta 240

caagtgtagc gtctgcgaca agacgttctc ttcttaccaa gctctcggtg gtcacaaggc 300

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gtcggcgaca accacatccg ccgtgactac tggaagtggg aaatcacacg tttgcaccat 420

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aggaaacaac aacatcaaca ctagtagcgt gtccaactcc gaaggtgcgg ggtccactag 540

ccacgttagc agtagccacc gtgggtttga cctcaacatc cctccgatcc ctgaattctc 600

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<213> Arabidopsis thaliana

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Pro Leu Phe Glu Asp Ser Ser Val Phe His Gly Val Glu His Trp Thr
20 25 30

Lys Gly Lys Arg Ser Lys Arg Ser Arg Ser Asp Phe His His Gln Asn
35 40 45

Leu Thr Glu Glu Glu Tyr Leu Ala Phe Cys Leu Met Leu Leu Ala Arg
50 55 60

Asp Asn Arg Gln Pro Pro Pro Pro Pro Ala Val Glu Lys Leu Ser Tyr
65 70 75 80

Lys Cys Ser Val Cys Asp Lys Thr Phe Ser Ser Tyr Gln Ala Leu Gly
85 90 95

Gly His Lys Ala Ser His Arg Lys Asn Leu Ser Gln Thr Leu Ser Gly
100 105 110

Gly Gly Asp Asp His Ser Thr Ser Ser Ala Thr Thr Thr Ser Ala Val
115 120 125

Thr Thr Gly Ser Gly Lys Ser His Val Cys Thr Ile Cys Asn Lys Ser
130 135 140

Phe Pro Ser Gly Gln Ala Leu Gly Gly His Lys Arg Cys His Tyr Glu
145 150 155 160

Gly Asn Asn Asn Ile Asn Thr Ser Ser Val Ser Asn Ser Glu Gly Ala
165 170 175

Gly Ser Thr Ser His Val Ser Ser Ser His Arg Gly Phe Asp Leu Asn
180 185 190

Ile Pro Pro Ile Pro Glu Phe Ser Met Val Asn Gly Asp Asp Glu Val
195 200 205

Met Ser Pro Met Pro Ala Lys Lys Pro Arg Phe Asp Phe Pro Val Lys
210 215 220

Leu Gln Leu
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<213> Artificial Sequence

<220>
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<210> 4
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<213> Artificial Sequence

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<213> Artificial Sequence

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<213> Artificial Sequence

<220>
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<223> Met or Trp

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Val, Trp or Tyr

<220>

<221> MOD_RES
<222> (5)..(5)
<223> Ala, Cys, Phe, Gly, His, Ile, Lys, Leu, Met, Arg, Thr,
Val, Trp or Tyr

<220>
<221> MOD_RES
<222> (6)..(6)
<223> Variable amino acid or not present

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Xaa Asp Leu Asn Xaa Xaa Pro
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<210> 8
<211> 7
<212> PRT
<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic peptide

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<222> (3)..(3)
<223> May or may not be present

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<210> 9
<211> 12
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

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<223> Variable amino acid

<220>
<221> MOD_RES
<222> (4)..(5)
<223> Variable amino acid

<220>
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<223> Variable amino acid

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<222> (10)..(11)
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<211> 1006
<212> DNA
<213> Datisca glomerata

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gacgacccca gcttgaatta ccttgagcca tggaccaagc gtaagcgttc caagcgtacg 180

cgcttagata gccccatacc gaggaagagt accttgcttt ctgcctcatc atgctcgctc 240

gtggccgcgt tgcctctgca aatcgacggg attctcagtc ttccattcag attcagcctg 300

aagcaacgac ttcggctacc aaagtcagtt ataagtgctc tgtgtgcgat aaggcctttt 360

cgtcttatca ggctttgggt gggcacaagg ccagccacag aaagctcgct ggcggcgaag 420

atcaatcgac ttcctttgcc accacgaatt cagccaccgt cactaccacc acagcctccg 480

gaggtggtgg caggtctcat gagtgttcta tttgccacaa atcgttcccg actggccagg 540

ccttgggtgg tcacaagcgc tgccactacg aaggcagtat cggcggcaat agtattcacc 600

accacaacaa taccaccaac agcggaagca acggtggcat gagcatgacc tccgaagtag 660

gttccacaca cacagtcagc cacagtcacc gtgacttcga tctcaacatc ccggccttgc 720

cggagtttcg gtcgaatttc ttcatatccg gggatgacga ggtcgagagt cctcatccgg 780

ccaagaaacc ccgtatattg atgaaataaa acatttctca agatcactga accaggcttt 840

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attaatatat ttcgtgtaca taaatttgta gttctttaac acactctgtt tcattttctt 960

gctttgctca actttgtatt ggttatttca ttatgaaaat tcaatt 1006

<210> 11
<211> 247
<212> PRT
<213> Datisca glomerata

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His Tyr Asp Asp Pro Ser Leu Asn Tyr Leu Glu Pro Trp Thr Lys Arg
20 25 30

Lys Arg Ser Lys Arg Thr Arg Leu Asp Ser Pro His Thr Glu Glu Glu
35 40 45

Tyr Leu Ala Phe Cys Leu Ile Met Leu Ala Arg Gly Arg Val Ala Ser
50 55 60

Ala Asn Arg Arg Asp Ser Gln Ser Ser Ile Gln Ile Gln Pro Glu Ala
65 70 75 80

Thr Thr Ser Ala Thr Lys Val Ser Tyr Lys Cys Ser Val Cys Asp Lys
85 90 95

Ala Phe Ser Ser Tyr Gln Ala Leu Gly Gly His Lys Ala Ser His Arg
100 105 110

Lys Leu Ala Gly Gly Glu Asp Gln Ser Thr Ser Phe Ala Thr Thr Asn
115 120 125

Ser Ala Thr Val Thr Thr Thr Thr Ala Ser Gly Gly Gly Gly Arg Ser
130 135 140

His Glu Cys Ser Ile Cys His Lys Ser Phe Pro Thr Gly Gln Ala Leu
145 150 155 160

Gly Gly His Lys Arg Cys His Tyr Glu Gly Ser Ile Gly Gly Asn Ser
165 170 175

Ile His His His Asn Asn Thr Thr Asn Ser Gly Ser Asn Gly Gly Met
180 185 190

Ser Met Thr Ser Glu Val Gly Ser Thr His Thr Val Ser His Ser His
195 200 205

Arg Asp Phe Asp Leu Asn Ile Pro Ala Leu Pro Glu Phe Arg Ser Asn
210 215 220

Phe Phe Ile Ser Gly Asp Asp Glu Val Glu Ser Pro His Pro Ala Lys
225 230 235 240

Lys Pro Arg Ile Leu Met Lys
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<210> 12
<211> 996
<212> DNA
<213> Glycine max

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ttgacgaccc aactattcca tgggcgaaac gaaaacgttc aaagcgttct cgcgaccatc 180

cttctgaaga agagtacctc gccctctgcc tcatcatgct cgctcgcggc ggcaccacca 240

ccgtcaacaa ccgccacgtc agccctccgc cgctacagcc acagccacag ccgacaccag 300

atccttccac caagctcagt tacaaatgct ccgtttgcga caagagcttc ccctcttacc 360

aagcgctcgg tggacacaag gccagtcacc ggaaactcgc cggcgccgcc gaagaccaac 420

cccccagcac caccacttcc tccgccgccg ccaccagctc cgcctccgga ggtaaggccc 480

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gttgtcacta cgaaggtaac ggtaacggaa ataacaacaa cagtaacagc gttgtcaccg 600

tcgcctcgga aggcgtgggc tccacccaca ctgtcagtca cggccaccac cgcgacttcg 660

atctcaacat cccggccttt ccggattttt cgaccaaggt cggagaagac gaggttgaga 720

gccctcaccc tgtcatgaag aagcctcgcc tcttcgtcat tcccaagatc gaaatccccc 780

aatttcaatg aactcgttga atttttagtt tatttttcga ctatatattt tggagaattt 840

tgagagttac tataatttga ttttgtacat agtacttgga agttttgttg gaccgtaccg 900

gacccagttc tctggttgag gttgtacttt cacaacagtg gcagatttgc aattcaattc 960

aatttatttg tttattttaa aaaaaaaaaa aaaaaa 996

<210> 13
<211> 240
<212> PRT
<213> Glycine max

<400> 13

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Met Ala Leu Glu Ala Leu Asn Ser Pro Thr Thr Thr Ala Pro Ser Phe
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Pro Phe Asp Asp Pro Thr Ile Pro Trp Ala Lys Arg Lys Arg Ser Lys
            20                  25                  30

Arg Ser Arg Asp His Pro Ser Glu Glu Glu Tyr Leu Ala Leu Cys Leu
        35                  40                  45

Ile Met Leu Ala Arg Gly Gly Thr Thr Thr Val Asn Asn Arg His Val
    50                  55                  60

Ser Pro Pro Pro Leu Gln Pro Gln Pro Gln Pro Thr Pro Asp Pro Ser
65                  70                  75                  80

Thr Lys Leu Ser Tyr Lys Cys Ser Val Cys Asp Lys Ser Phe Pro Ser
                85                  90                  95
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Tyr Gln Ala Leu Gly Gly His Lys Ala Ser His Arg Lys Leu Ala Gly
            100                 105                 110

Ala Ala Glu Asp Gln Pro Pro Ser Thr Thr Thr Ser Ser Ala Ala Ala
        115                 120                 125

Thr Ser Ser Ala Ser Gly Gly Lys Ala His Glu Cys Ser Ile Cys His
    130                 135                 140

Lys Ser Phe Pro Thr Gly Gln Ala Leu Gly Gly His Lys Arg Cys His
145                 150                 155                 160

Tyr Glu Gly Asn Gly Asn Gly Asn Asn Asn Asn Ser Asn Ser Val Val
                165                 170                 175

Thr Val Ala Ser Glu Gly Val Gly Ser Thr His Thr Val Ser His Gly
            180                 185                 190

His His Arg Asp Phe Asp Leu Asn Ile Pro Ala Phe Pro Asp Phe Ser
        195                 200                 205

Thr Lys Val Gly Glu Asp Glu Val Glu Ser Pro His Pro Val Met Lys
    210                 215                 220

Lys Pro Arg Leu Phe Val Ile Pro Lys Ile Glu Ile Pro Gln Phe Gln
225                 230                 235                 240
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<210> 14
<211> 1006
<212> DNA
<213> Medicago sativa

<400> 14

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tggaagcact taactcaccc accactgcta ctcctttcac acccttgag gaaccaaatc     180

tgagttatct tgaaacaccg tggacgaaag gtaaacgatc aaagcgttct cgcatggatc    240

aatcttcatg cactgaagaa gagtatctcg ctctttgtct catcatgctt gctcgcagcg    300

gtaacaacaa cgacaaaaag tctgattcgg tggcgacgcc gctaaccacc gttaaactca    360

gtcacaaatg ctcagtctgc aacaaagctt tctcatctta tcaagcccta ggtggacaca    420

aagccagtca ccggaaagct gttatgtccg caaccaccgc tgaagatcag atcaccacca    480

cttcatccgc cgtgactacc agctctgctt ccaacggtaa gaacaagact catgagtgtt    540

ccatctgtca caaatccttc cctactggac aggctttggg aggacacaag cgttgtcact    600
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acgaaggcag cgttggtgcc ggtgccggtg ctggaagtaa cgctgtaact gcctctgaag 660

gagttggatt gtcacacagc caccaccgtg attttgatct taacctcccg gcttttccgg 720

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acggttgtag acaatggaaa ttcaattcaa ttatttaatt ttgtgt 1006

<210> 15
<211> 235
<212> PRT
<213> Medicago sativa

<400> 15

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Pro Phe Glu Glu Pro Asn Leu Ser Tyr Leu Glu Thr Pro Trp Thr Lys
            20                  25                  30

Gly Lys Arg Ser Lys Arg Ser Arg Met Asp Gln Ser Ser Cys Thr Glu
        35                  40                  45

Glu Glu Tyr Leu Ala Leu Cys Leu Ile Met Leu Ala Arg Ser Gly Asn
    50                  55                  60

Asn Asn Asp Lys Lys Ser Asp Ser Val Ala Thr Pro Leu Thr Thr Val
65                  70                  75                  80

Lys Leu Ser His Lys Cys Ser Val Cys Asn Lys Ala Phe Ser Ser Tyr
                85                  90                  95

Gln Ala Leu Gly Gly His Lys Ala Ser His Arg Lys Ala Val Met Ser
            100                 105                 110

Ala Thr Thr Ala Glu Asp Gln Ile Thr Thr Thr Ser Ser Ala Val Thr
        115                 120                 125

Thr Ser Ser Ala Ser Asn Gly Lys Asn Lys Thr His Glu Cys Ser Ile
    130                 135                 140

Cys His Lys Ser Phe Pro Thr Gly Gln Ala Leu Gly Gly His Lys Arg
145                 150                 155                 160

Cys His Tyr Glu Gly Ser Val Gly Ala Gly Ala Gly Ala Gly Ser Asn
                165                 170                 175
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Ala Val Thr Ala Ser Glu Gly Val Gly Leu Ser His Ser His His Arg
180 185 190

Asp Phe Asp Leu Asn Leu Pro Ala Phe Pro Asp Phe Ser Lys Lys Phe
195 200 205

Phe Val Asp Asp Glu Val Phe Ser Pro Leu Pro Ala Ala Lys Lys Pro
210 215 220

Cys Leu Phe Lys Leu Glu Ile Pro Ser His Tyr
225 230 235

<210> 16
<211> 1061
<212> DNA
<213> Nicotiana tabacum

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ggattcttgg gctaaaggaa aacgatcaaa acggccccgt attgatgccc caccgactga 180

agaagagtat ttagccctct gtctcatcat gctcgctcgc agcggaaccg gaaccagaac 240

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gtgtgacaag gctttttctt cttatcaagc actcggtggg cataaagcaa gtcaccgtaa 420

aactactact actgctaccg ccgcctctga tgataacaat ccttcaactt caacttccac 480

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caaactcggt ggtaacagcc gcgacttagg cggcggcggc ggcggcggtc atagtggaag 660

cgtcttgact acttcagacg gcggcgcgtc gactcacacg ctacgtgact ttgacctgaa 720

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gtaaattggt tcatgtgatt ttatttttag gaaaaggaat tattgattgt tttacccgtt 960

tattcttagg gtggtattat gtacagggag tgaatcattc attggtttta cactttctta 1020

attatatatt ctttttttt acacataaaa aaaaaaaaaa a 1061

<210> 17
<211> 273

<212> PRT
<213> Nicotiana tabacum

<400> 17

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            20                  25                  30

Ala Lys Gly Lys Arg Ser Lys Arg Pro Arg Ile Asp Ala Pro Pro Thr
        35                  40                  45

Glu Glu Glu Tyr Leu Ala Leu Cys Leu Ile Met Leu Ala Arg Ser Gly
    50                  55                  60

Thr Gly Thr Arg Thr Gly Leu Thr Asp Ala Thr Thr Ser Gln Gln Pro
65                  70                  75                  80

Ala Asp Lys Lys Thr Ala Glu Leu Pro Pro Val His Lys Lys Glu Val
                85                  90                  95

Ala Thr Glu Gln Ala Glu Gln Ser Tyr Lys Cys Ser Val Cys Asp Lys
            100                 105                 110

Ala Phe Ser Ser Tyr Gln Ala Leu Gly Gly His Lys Ala Ser His Arg
        115                 120                 125

Lys Thr Thr Thr Thr Ala Thr Ala Ala Ser Asp Asp Asn Asn Pro Ser
    130                 135                 140

Thr Ser Thr Ser Thr Gly Ala Val Asn Ile Ser Ala Leu Asn Pro Thr
145                 150                 155                 160

Gly Arg Ser His Val Cys Ser Ile Cys His Lys Ala Phe Pro Thr Gly
                165                 170                 175

Gln Ala Leu Gly Gly His Lys Arg Arg His Tyr Glu Gly Lys Leu Gly
            180                 185                 190

Gly Asn Ser Arg Asp Leu Gly Gly Gly Gly Gly Gly Gly His Ser Gly
        195                 200                 205

Ser Val Leu Thr Thr Ser Asp Gly Gly Ala Ser Thr His Thr Leu Arg
    210                 215                 220

Asp Phe Asp Leu Asn Met Pro Ala Ser Pro Glu Leu Gln Leu Gly Leu
225                 230                 235                 240
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Ser Ile Asp Cys Gly Arg Lys Ser Gln Leu Leu Pro Met Val Gln Glu
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Val Glu Ser Pro Met Pro Ala Lys Lys Pro Arg Leu Leu Phe Ser Leu
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Gly

<210> 18
<211> 1213
<212> DNA
<213> Oryza sativa

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gcaacggcca gtccgccacc cgggcgttcg acctcaacct cccggccgtg ccggagttcg 840

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aaaaaaaaaa aaa 1213

<210> 19

<211> 269
<212> PRT
<213> Oryza sativa

<400> 19

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Glu Glu Gln Gln Gln His Glu Val Glu Glu Ala Thr Val Val Thr Ser
            20                  25                  30

Ser Ser Ala Thr Ser Gly Glu Glu Gly Gly His Leu Pro Gln Gly Trp
        35                  40                  45

Ala Lys Arg Lys Arg Ser Arg Arg Gln Arg Ser Glu Glu Glu Asn Leu
    50                  55                  60

Ala Leu Cys Leu Leu Met Leu Ala Arg Gly Gly His His Arg Val Gln
65                  70                  75                  80

Ala Pro Pro Pro Leu Ser Ala Ser Ala Pro Pro Pro Ala Gly Ala Glu
                85                  90                  95

Phe Lys Cys Ser Val Cys Gly Lys Ser Phe Ser Ser Tyr Gln Ala Leu
            100                 105                 110

Gly Gly His Lys Thr Ser His Arg Val Lys Leu Pro Thr Pro Pro Ala
        115                 120                 125

Ala Pro Val Leu Ala Pro Ala Pro Val Ala Ala Leu Leu Pro Ser Ala
    130                 135                 140

Glu Asp Arg Glu Pro Ala Thr Ser Ser Thr Ala Ala Ser Ser Asp Gly
145                 150                 155                 160

Met Thr Asn Arg Val His Arg Cys Ser Ile Cys Gln Lys Glu Phe Pro
                165                 170                 175

Thr Gly Gln Ala Leu Gly Gly His Lys Arg Lys His Tyr Asp Gly Gly
            180                 185                 190

Val Gly Ala Gly Ala Gly Ala Ser Ser Thr Glu Leu Leu Ala Thr Val
        195                 200                 205

Ala Ala Glu Ser Glu Val Gly Ser Ser Gly Asn Gly Gln Ser Ala Thr
    210                 215                 220

Arg Ala Phe Asp Leu Asn Leu Pro Ala Val Pro Glu Phe Val Trp Arg
225                 230                 235                 240
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Pro Cys Ser Lys Gly Lys Lys Met Trp Asp Glu Glu Glu Glu Val Gln
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<212> DNA
<213> Petunia x hybrida

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aatacaaaca agaaaatttt ctctctatac ttgattgagt ttagtaaggc aaacaagaaa 180

actatcatgg cacttgaagc attgaattct ccaactacaa caacaccacc atcattccaa 240

tttgagaaca acgggcttaa gtaccttgag agttggacaa aaggtaaaag atcaaaaagg 300

caacgcagca tggaacgaca gtgtactgaa gaagagtatt tagcactttg tcttatcatg 360

ctagcacgta gcgatggttc tgttaataac tcacggtctc taccaccacc accactacca 420

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aagtgttccg tttgtggtaa agggtttggg tcttatcaag ctttaggtgg acataaagca 540

agtcaccgga aacttgtcag catgggagga gatgaacaat ctactacttc cactactact 600

aacgtaacgg gaactagttc cgctaacgtt aacggtaacg gaagaactca cgaatgttca 660

atttgtcaca agtgctttcc tactggacaa gctttaggtg gtcataaaag gtgccactat 720

gacggtggta acggtaacgg taacggaagt gtaagtgttg gggtgacgtc atctgaaggt 780

gtggggtcca ctattagtca tcaccgtgac tttgacttga atattcccgc gttgccggag 840

ttttggccgg gatttggttc cggcgaggat gaggtggaga gtcctcatcc agcaaagaag 900

tcaaggctat ctcttccacc taaacttgaa ttattcaaag gattatagag ggaatattga 960

tttgttacag gaagatttat taggattcac gaatttttg ttgactagtt tatgtaatat 1020

<210> 21
<211> 253
<212> PRT
<213> Petunia x hybrida

<400> 21
Met Ala Leu Glu Ala Leu Asn Ser Pro Thr Thr Thr Thr Pro Pro Ser
1 5 10 15

Phe Gln Phe Glu Asn Asn Gly Leu Lys Tyr Leu Glu Ser Trp Thr Lys
20 25 30

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Gly Lys Arg Ser Lys Arg Gln Arg Ser Met Glu Arg Gln Cys Thr Glu
        35                  40                  45

Glu Glu Tyr Leu Ala Leu Cys Leu Ile Met Leu Ala Arg Ser Asp Gly
    50                  55                  60

Ser Val Asn Asn Ser Arg Ser Leu Pro Pro Pro Pro Leu Pro Pro Ser
65                  70                  75                  80

Val Pro Val Thr Ser Gln Ile Asn Ala Thr Leu Leu Glu Gln Lys Asn
                85                  90                  95

Leu Tyr Lys Cys Ser Val Cys Gly Lys Gly Phe Gly Ser Tyr Gln Ala
            100                 105                 110

Leu Gly Gly His Lys Ala Ser His Arg Lys Leu Val Ser Met Gly Gly
        115                 120                 125

Asp Glu Gln Ser Thr Thr Ser Thr Thr Thr Asn Val Thr Gly Thr Ser
    130                 135                 140

Ser Ala Asn Val Asn Gly Asn Gly Arg Thr His Glu Cys Ser Ile Cys
145                 150                 155                 160

His Lys Cys Phe Pro Thr Gly Gln Ala Leu Gly Gly His Lys Arg Cys
                165                 170                 175

His Tyr Asp Gly Gly Asn Gly Asn Gly Asn Gly Ser Val Ser Val Gly
            180                 185                 190

Val Thr Ser Ser Glu Gly Val Gly Ser Thr Ile Ser His His Arg Asp
        195                 200                 205

Phe Asp Leu Asn Ile Pro Ala Leu Pro Glu Phe Trp Pro Gly Phe Gly
    210                 215                 220

Ser Gly Glu Asp Glu Val Glu Ser Pro His Pro Ala Lys Lys Ser Arg
225                 230                 235                 240

Leu Ser Leu Pro Pro Lys Leu Glu Leu Phe Lys Gly Leu
                245                 250
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<210> 22
<211> 786
<212> DNA
<213> Triticum aestivum

<400> 22
atgtcgtcgt cggccatgga agcgctccac gccctgatcc cggagcagca ccagctggac 60

gttgaggcgg ctgcggctgt cagcagcgcc accagcggcg aggagagcgg ccacgtgctg 120

caggggtggg ccaagaggaa gcgatcgcgc cgccagcgct ccgaggagga gaacctcgcg 180

ctctgcctcc tcatgctctc gcgcggcggc aagcagcgtg ttcaggcgcc gcagccggag 240

tcgttcgctg cgccggtgcc tgccgagttc aagtgctccg tctgcggcaa gtccttcagc 300

tcctaccagg cgctcggagg ccacaagacg agccaccggg tgaagcagcc gtctcctccc 360

tctgatgccg ctgctgcccc actcgtggcc ctcccggccg tcgccgccat cctgccgtcc 420

gccgagccgg ccacgtcgtc caccgccgcg tcctccgacg gcgcgaccaa cagagtccac 480

aggtgctcca tctgccaaaa ggagttcccg actgggcagg cgctcggcgg gcacaagagg 540

aagcactacg acggaggcgt gggcgccgcc gcctcgtcga ccgagcttct ggccgccgcg 600

gccgccgagt ctgaggtggg gagcaccggc aacgggagct ccgccgcccg ggccttcgac 660

ctgaacattc cggccgtgcc ggagttcgtg tggaggccgt gcgccaaggg caagatgatg 720

tgggaggacg atgaggaggt gcagagcccc ctcgccttca agaagcctcg gcttctcacc 780

gcttga 786

<210> 23
<211> 261
<212> PRT
<213> Triticum aestivum

<400> 23
Met Ser Ser Ser Ala Met Glu Ala Leu His Ala Leu Ile Pro Glu Gln
1 5 10 15

His Gln Leu Asp Val Glu Ala Ala Ala Ala Val Ser Ser Ala Thr Ser
20 25 30

Gly Glu Glu Ser Gly His Val Leu Gln Gly Trp Ala Lys Arg Lys Arg
35 40 45

Ser Arg Arg Gln Arg Ser Glu Glu Glu Asn Leu Ala Leu Cys Leu Leu
50 55 60

Met Leu Ser Arg Gly Gly Lys Gln Arg Val Gln Ala Pro Gln Pro Glu
65 70 75 80

Ser Phe Ala Ala Pro Val Pro Ala Glu Phe Lys Cys Ser Val Cys Gly
85 90 95

Lys Ser Phe Ser Ser Tyr Gln Ala Leu Gly Gly His Lys Thr Ser His
100 105 110

Arg Val Lys Gln Pro Ser Pro Pro Ser Asp Ala Ala Ala Ala Pro Leu
115 120 125

Val Ala Leu Pro Ala Val Ala Ala Ile Leu Pro Ser Ala Glu Pro Ala
130 135 140

Thr Ser Ser Thr Ala Ala Ser Ser Asp Gly Ala Thr Asn Arg Val His
145 150 155 160

Arg Cys Ser Ile Cys Gln Lys Glu Phe Pro Thr Gly Gln Ala Leu Gly
165 170 175

Gly His Lys Arg Lys His Tyr Asp Gly Gly Val Gly Ala Ala Ala Ser
180 185 190

Ser Thr Glu Leu Leu Ala Ala Ala Ala Ala Glu Ser Glu Val Gly Ser
195 200 205

Thr Gly Asn Gly Ser Ser Ala Ala Arg Ala Phe Asp Leu Asn Ile Pro
210 215 220

Ala Val Pro Glu Phe Val Trp Arg Pro Cys Ala Lys Gly Lys Met Met
225 230 235 240

Trp Glu Asp Asp Glu Glu Val Gln Ser Pro Leu Ala Phe Lys Lys Pro
245 250 255

Arg Leu Leu Thr Ala
260

<210> 24
<211> 1026
<212> DNA
<213> Capsicum annum

<400> 24
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aacggatatc gatatggcac ttgaagcttt gaattctcca actggtacac caactccgcc 120

accgtttcaa tttgagagcg acggccaaca gcttcgatat atcgaaaact ggaggaaggg 180

aaagagatct aaaaggtcac gcagcatgga gcaccagcct actgaggaag aatacttagc 240

gctttgtttg atcatgcttg cacgtagcgg tggctccgtt aatcatcaac gatctctacc 300

accgccggct ccggtgatga aactgcacgc gccgtcgtca tcatcggcgg cggaggagga 360

gaaggagaag atggtgtata agtgttcggt ttgtggtaag ggatttgggt cttatcaagc 420

tttaggtgga cacaaagcta gtcaccggaa actcgtaccc ggcggagatg atcagtcaac 480

tacctccaca accactaacg caaccggaac aacaacctcc gttaacggca acggcaacag 540

aagtggaagg actcacgagt gttcgatttg tcacaagtgt tttcccactg gacaagcttt 600

aggtggacac aaaaggtgtc actacgacgg cggtatcggt aacggaaacg ctaacagtgg 660

cgttagtgct agcgttggag tgacgtcatc ggagggtgtg gggtccacag tcagtcaccg 720

ggatttcgac ttgaacattc cggcgttgcc ggaattctgg ctgggatttg gttccggcga 780

agatgaggtg gagagtccac atccggcgaa gaaatcgcgg ttatgtttgc ctccaaaata 840

tgaattattt caacattaat gggaatttga ttgttaggat ttactatttt ggtagacaaa 900

attatactat gtaagtttta attttcattg tgggtgggag caaaattttt aatttttgt 960

ctatagacct agctagttac taatagcaaa aattcaattg attgatttaa aaaaaaaaaa 1020

aaaaaa 1026

<210> 25
<211> 261
<212> PRT
<213> Capsicum annum

<400> 25

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Met Ala Leu Glu Ala Leu Asn Ser Pro Thr Gly Thr Pro Thr Pro Pro
1               5                  10                  15

Pro Phe Gln Phe Glu Ser Asp Gly Gln Gln Leu Arg Tyr Ile Glu Asn
            20                  25                  30

Trp Arg Lys Gly Lys Arg Ser Lys Arg Ser Arg Ser Met Glu His Gln
        35                  40                  45

Pro Thr Glu Glu Glu Tyr Leu Ala Leu Cys Leu Ile Met Leu Ala Arg
    50                  55                  60

Ser Gly Gly Ser Val Asn His Gln Arg Ser Leu Pro Pro Pro Ala Pro
65                  70                  75                  80

Val Met Lys Leu His Ala Pro Ser Ser Ser Ser Ala Ala Glu Glu Glu
                85                  90                  95

Lys Glu Lys Met Val Tyr Lys Cys Ser Val Cys Gly Lys Gly Phe Gly
            100                 105                 110

Ser Tyr Gln Ala Leu Gly Gly His Lys Ala Ser His Arg Lys Leu Val
        115                 120                 125

Pro Gly Gly Asp Asp Gln Ser Thr Thr Ser Thr Thr Thr Asn Ala Thr
    130                 135                 140
```

```
Gly Thr Thr Thr Ser Val Asn Gly Asn Gly Asn Arg Ser Gly Arg Thr
145                 150                 155                 160

His Glu Cys Ser Ile Cys His Lys Cys Phe Pro Thr Gly Gln Ala Leu
                165                 170                 175

Gly Gly His Lys Arg Cys His Tyr Asp Gly Gly Ile Gly Asn Gly Asn
            180                 185                 190

Ala Asn Ser Gly Val Ser Ala Ser Val Gly Val Thr Ser Ser Glu Gly
        195                 200                 205

Val Gly Ser Thr Val Ser His Arg Asp Phe Asp Leu Asn Ile Pro Ala
    210                 215                 220

Leu Pro Glu Phe Trp Leu Gly Phe Gly Ser Gly Glu Asp Glu Val Glu
225                 230                 235                 240

Ser Pro His Pro Ala Lys Lys Ser Arg Leu Cys Leu Pro Pro Lys Tyr
                245                 250                 255

Glu Leu Phe Gln His
            260
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<210> 26
<211> 1068
<212> DNA
<213> Arabidopsis thaliana

<400> 26

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acttttctct caaatttctg atcctttgat ccaacagtta gaagaagatt catctgatca    120

tggccctcga agcgatgaac actccaactt cttctttcac cagaatcgaa acgaaagaag    180

atttgatgaa cgacgccgtt ttcattgagc cgtggcttaa acgcaaacgc tccaaacgtc    240

agcgttctca cagcccttct tcgtcttctt cctcaccgcc tcgatctcga cccaaatccc    300

agaatcaaga tcttacggaa gaagagtatc tcgctctttg tctcctcatg ctcgctaaag    360

atcaaccgtc gcaaacgcga tttcatcaac agtcgcaatc gttaacgccg ccgccagaat    420

caaagaacct tccgtacaag tgtaacgtct gtgaaaaagc gtttccttcc tatcaggctt    480

taggcggtca caaagcaagt caccgaatca aaccaccaac cgtaatctca acaaccgccg    540

atgattcaac agctccgacc atctccatcg tcgccggaga aaaacatccg attgctgcct    600

ccggaaagat ccacgagtgt tcaatctgtc ataaagtgtt tccgacgggt caagctttag    660

gcggtcacaa acgttgtcac tacgaaggca acctcggcgg cggaggagga ggaggaagca    720

aatcaatcag tcacagtgga agcgtgtcga gcacggtatc ggaagaaagg agccaccgtg    780
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gattcatcga tctaaaccta ccggcgttac ctgaactcag ccttcatcac aatccaatcg 840

tcgacgaaga gatcttgagt ccgttgaccg gtaaaaaacc gcttttgttg accgatcacg 900

accaagtcat caagaaagaa gatttatctt taaaaatcta atactcgact attaattctt 960

gtgtgatttt tttcgttaca accatagttt cattttcatt tttttagtta caaattttta 1020

attgttctga tttggattga atattggtat attgttaggg gttgatac 1068

<210> 27
<211> 273
<212> PRT
<213> Arabidopsis thaliana

<400> 27

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Met Ala Leu Glu Ala Met Asn Thr Pro Thr Ser Ser Phe Thr Arg Ile
1               5                  10                  15

Glu Thr Lys Glu Asp Leu Met Asn Asp Ala Val Phe Ile Glu Pro Trp
            20                  25                  30

Leu Lys Arg Lys Arg Ser Lys Arg Gln Arg Ser His Ser Pro Ser Ser
        35                  40                  45

Ser Ser Ser Ser Pro Pro Arg Ser Arg Pro Lys Ser Gln Asn Gln Asp
    50                  55                  60

Leu Thr Glu Glu Glu Tyr Leu Ala Leu Cys Leu Leu Met Leu Ala Lys
65                  70                  75                  80

Asp Gln Pro Ser Gln Thr Arg Phe His Gln Gln Ser Gln Ser Leu Thr
                85                  90                  95

Pro Pro Pro Glu Ser Lys Asn Leu Pro Tyr Lys Cys Asn Val Cys Glu
            100                 105                 110

Lys Ala Phe Pro Ser Tyr Gln Ala Leu Gly Gly His Lys Ala Ser His
        115                 120                 125

Arg Ile Lys Pro Pro Thr Val Ile Ser Thr Thr Ala Asp Asp Ser Thr
    130                 135                 140

Ala Pro Thr Ile Ser Ile Val Ala Gly Glu Lys His Pro Ile Ala Ala
145                 150                 155                 160

Ser Gly Lys Ile His Glu Cys Ser Ile Cys His Lys Val Phe Pro Thr
                165                 170                 175

Gly Gln Ala Leu Gly Gly His Lys Arg Cys His Tyr Glu Gly Asn Leu
```

180 185 190

Gly Gly Gly Gly Gly Gly Gly Ser Lys Ser Ile Ser His Ser Gly Ser
195 200 205

Val Ser Ser Thr Val Ser Glu Glu Arg Ser His Arg Gly Phe Ile Asp
210 215 220

Leu Asn Leu Pro Ala Leu Pro Glu Leu Ser Leu His His Asn Pro Ile
225 230 235 240

Val Asp Glu Glu Ile Leu Ser Pro Leu Thr Gly Lys Lys Pro Leu Leu
245 250 255

Leu Thr Asp His Asp Gln Val Ile Lys Lys Glu Asp Leu Ser Leu Lys
260 265 270

Ile

<210> 28
<211> 976
<212> DNA
<213> Arabidopsis thaliana

<400> 28
aaatcaaatc ttttcattta caattatctt tcttctcaat ttagaactta gtagctagtc 60

ttcaagataa tggcacttga aactcttact tctccaagat tatcttctcc gatgccgact 120

ctgtttcaag attcagcact agggtttcat ggaagcaaag gcaaacgatc taagcgatca 180

agatctgaat tcgaccgtca gagtctcacg gaggatgaat atatcgcttt atgtctcatg 240

cttcttgctc gcgacggaga tagaaaccgt gaccttgacc tgccttcttc ttcgtcttca 300

cctcctctgc ttcctcctct tcctactccg atctacaagt gtagcgtctg tgacaaggcg 360

ttttcgtctt accaggctct tggtggacac aaggcaagtc accggaaaag cttttcgctt 420

actcaatctg ccggaggaga tgagctgtcg acatcgtcgg cgataaccac gtctggtata 480

tccggtggcg ggggaggaag tgtgaagtcg cacgtttgct ctatctgtca taaatcgttc 540

gccaccggtc aagctctcgg cggccacaaa cggtgccact acgaaggaaa gaacggaggc 600

ggtgtgagta gtagcgtgtc gaattctgaa gatgtggggt ctacaagcca cgtcagcagt 660

ggccaccgtg ggtttgacct caacataccg ccgataccgg aattctcgat ggtcaacgga 720

gacgaagagg tgatgagtcc tatgccggcg aagaaactcc ggtttgactt cccggagaaa 780

ccctaaacat aaacctagga aaaactttac agaattcatt ttataggaaa ttgttttact 840

gtatatacaa atatcgattt tgattgatgt tcttcttcac tgaaaaatta tgattctttg 900

ttgtataatt gatgtttctg aaaaagatat aacttttttat tgtttcacac gtatcaaaat 960

ttgcttggat acatca 976

<210> 29
<211> 238
<212> PRT
<213> Arabidopsis thaliana

<400> 29

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Met Ala Leu Glu Thr Leu Thr Ser Pro Arg Leu Ser Ser Pro Met Pro
1               5                  10                  15

Thr Leu Phe Gln Asp Ser Ala Leu Gly Phe His Gly Ser Lys Gly Lys
            20                  25                  30

Arg Ser Lys Arg Ser Arg Ser Glu Phe Asp Arg Gln Ser Leu Thr Glu
        35                  40                  45

Asp Glu Tyr Ile Ala Leu Cys Leu Met Leu Leu Ala Arg Asp Gly Asp
    50                  55                  60

Arg Asn Arg Asp Leu Asp Leu Pro Ser Ser Ser Ser Ser Pro Pro Leu
65                  70                  75                  80

Leu Pro Pro Leu Pro Thr Pro Ile Tyr Lys Cys Ser Val Cys Asp Lys
                85                  90                  95

Ala Phe Ser Ser Tyr Gln Ala Leu Gly Gly His Lys Ala Ser His Arg
            100                 105                 110

Lys Ser Phe Ser Leu Thr Gln Ser Ala Gly Gly Asp Glu Leu Ser Thr
        115                 120                 125

Ser Ser Ala Ile Thr Thr Ser Gly Ile Ser Gly Gly Gly Gly Gly Ser
    130                 135                 140

Val Lys Ser His Val Cys Ser Ile Cys His Lys Ser Phe Ala Thr Gly
145                 150                 155                 160

Gln Ala Leu Gly Gly His Lys Arg Cys His Tyr Glu Gly Lys Asn Gly
                165                 170                 175

Gly Gly Val Ser Ser Ser Val Ser Asn Ser Glu Asp Val Gly Ser Thr
            180                 185                 190

Ser His Val Ser Ser Gly His Arg Gly Phe Asp Leu Asn Ile Pro Pro
        195                 200                 205
```

Ile Pro Glu Phe Ser Met Val Asn Gly Asp Glu Glu Val Met Ser Pro
210 215 220

Met Pro Ala Lys Lys Leu Arg Phe Asp Phe Pro Glu Lys Pro
225 230 235

<210> 30
<211> 718
<212> DNA
<213> Arabidopsis thaliana

<400> 30
atggctctcg acactctcaa ttctcccacc tccaccacca caaccaccgc tcctcctcct 60

ttcctccgtt gcctcgacga aaccgagccc gaaaacctcg aatcatggac caaaagaaaa 120

cgtacaaaac gtcaccgtat agatcaacca aaccctcctc cttctgaaga agagtatctc 180

gctctttgcc tccttatgct cgctcgtggc tcctccgatc atcactctcc accgtcggat 240

catcactctc tttctccact gtccgatcat cagaaagatt acaagtgttc cgtctgtggc 300

aaatctttcc cgtcttacca agcgttaggt ggacacaaaa caagtcaccg gaaaccggtt 360

agtgtcgatg ttaataatag taacggaacc gttactaata acggaaatat tagtaacggt 420

ttagttggtc aaagtgggaa gactcataac tgctctatat gttttaagtc gtttccctct 480

ggtcaagcat tgggtggtca caaacgttgt cactatgatg gtggtaacgg taacagtaac 540

ggtgacaata gccacaagtt tgacctaaat ttaccggctg atcaagttag tgatgagaca 600

attggaaaaa gtcaactctc cggtgaagaa acaaagtcgg tgttgtgatt attattattt 660

tttaccgatc gggattagct agtggttgat cattagctga gtctgtaatg aaaatgat 718

<210> 31
<211> 215
<212> PRT
<213> Arabidopsis thaliana

<400> 31
Met Ala Leu Asp Thr Leu Asn Ser Pro Thr Ser Thr Thr Thr Thr Thr
1 5 10 15

Ala Pro Pro Pro Phe Leu Arg Cys Leu Asp Glu Thr Glu Pro Glu Asn
20 25 30

Leu Glu Ser Trp Thr Lys Arg Lys Arg Thr Lys Arg His Arg Ile Asp
35 40 45

Gln Pro Asn Pro Pro Pro Ser Glu Glu Glu Tyr Leu Ala Leu Cys Leu
50 55 60

Leu Met Leu Ala Arg Gly Ser Ser Asp His His Ser Pro Pro Ser Asp
65 70 75 80

```
His His Ser Leu Ser Pro Leu Ser Asp His Gln Lys Asp Tyr Lys Cys
                85                  90                  95

Ser Val Cys Gly Lys Ser Phe Pro Ser Tyr Gln Ala Leu Gly Gly His
            100                 105                 110

Lys Thr Ser His Arg Lys Pro Val Ser Val Asp Val Asn Asn Ser Asn
        115                 120                 125

Gly Thr Val Thr Asn Asn Gly Asn Ile Ser Asn Gly Leu Val Gly Gln
    130                 135                 140

Ser Gly Lys Thr His Asn Cys Ser Ile Cys Phe Lys Ser Phe Pro Ser
145                 150                 155                 160

Gly Gln Ala Leu Gly Gly His Lys Arg Cys His Tyr Asp Gly Gly Asn
                165                 170                 175

Gly Asn Ser Asn Gly Asp Asn Ser His Lys Phe Asp Leu Asn Leu Pro
            180                 185                 190

Ala Asp Gln Val Ser Asp Glu Thr Ile Gly Lys Ser Gln Leu Ser Gly
        195                 200                 205

Glu Glu Thr Lys Ser Val Leu
    210                 215
```

<210> 32
<211> 702
<212> DNA
<213> Arabidopsis thaliana

<400> 32

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aaatttttcta tagcaatggc gcttgaagct cttaattcac caagattggt cgaggatccc     60

ttaagattca atggcgttga gcagtggacc aaatgtaaga aacgatccaa acgttcgaga    120

tctgatcttc atcataacca ccgtctcact gaggaagagt atctagcttt ctgtctcatg    180

cttcttgctc gggatggcgg cgatcttgac tctgtgacgg ttgcggagaa gccgagttat    240

aagtgtggcg tttgttacaa gacgttttcg tcttaccaag ctctcggcgg tcataaagcg    300

agccaccgga gcttatacgg tggtggagag aatgataaat cgacaccatc caccgccgtg    360

aaatctcacg tttgttcggt ttgcgggaaa tctttcgcca ccggtcaagc tctcggcggc    420

cacaagcggt gccactacga tggtggcgtt tcgaactcgg aaggtgtggg gtctactagc    480

cacgtcagca gtagtagcca ccgtggattt gaccttaata ttataccggt gcagggattt    540

tcgccggacg acgaagtgat gagtccgatg gcgactaaga agcctcgcct gaagtaagtc    600
```

tttgttgaag acctggaagt ttatcaaatg taaatatcaa atttcaattt caaggaacag 660

ttttgttgat tctattacca atacacaata cgattcaatt cc 702

<210> 33
<211> 193
<212> PRT
<213> Arabidopsis thaliana

<400> 33
Met Ala Leu Glu Ala Leu Asn Ser Pro Arg Leu Val Glu Asp Pro Leu
1 5 10 15

Arg Phe Asn Gly Val Glu Gln Trp Thr Lys Cys Lys Lys Arg Ser Lys
20 25 30

Arg Ser Arg Ser Asp Leu His His Asn His Arg Leu Thr Glu Glu Glu
35 40 45

Tyr Leu Ala Phe Cys Leu Met Leu Leu Ala Arg Asp Gly Gly Asp Leu
50 55 60

Asp Ser Val Thr Val Ala Glu Lys Pro Ser Tyr Lys Cys Gly Val Cys
65 70 75 80

Tyr Lys Thr Phe Ser Ser Tyr Gln Ala Leu Gly Gly His Lys Ala Ser
85 90 95

His Arg Ser Leu Tyr Gly Gly Gly Glu Asn Asp Lys Ser Thr Pro Ser
100 105 110

Thr Ala Val Lys Ser His Val Cys Ser Val Cys Gly Lys Ser Phe Ala
115 120 125

Thr Gly Gln Ala Leu Gly Gly His Lys Arg Cys His Tyr Asp Gly Gly
130 135 140

Val Ser Asn Ser Glu Gly Val Gly Ser Thr Ser His Val Ser Ser Ser
145 150 155 160

Ser His Arg Gly Phe Asp Leu Asn Ile Ile Pro Val Gln Gly Phe Ser
165 170 175

Pro Asp Asp Glu Val Met Ser Pro Met Ala Thr Lys Lys Pro Arg Leu
180 185 190

Lys

<210> 34
<211> 1157
<212> DNA
<213> Arabidopsis thaliana

<400> 34
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attaaatctt atggctctcg agactctcaa ttctccaaca gctaccacca ccgctcggcc 120

tcttctccgg tatcgtgaag aaatggagcc tgagaatctc gagcaatggg ctaaaagaaa 180

acgaacaaaa cgtcaacgtt ttgatcacgg tcatcagaat caagaaacga acaagaacct 240

tccttctgaa gaagagtatc tcgctctttg tctcctcatg ctcgctcgtg gctccgccgt 300

acaatctcct cctcttcctc ctctaccgtc acgtgcgtca ccgtccgatc accgagatta 360

caagtgtacg gtctgtggga agtccttttc gtcataccaa gccttaggtg gacacaagac 420

gagtcaccgg aaaccgacga acactagtat cacttccggt aaccaagaac tgtctaataa 480

cagtcacagt aacagcggtt ccgttgttat taacgttacc gtgaacactg gtaacggtgt 540

tagtcaaagc ggaaagattc acacttgctc aatctgtttc aagtcgtttg cgtctggtca 600

agccttaggt ggacacaaac ggtgtcacta tgacggtggc aacaacggta acggtaacgg 660

aagtagcagc aacagcgtag aactcgtcgc tggtagtgac gtcagcgatg ttgataatga 720

gagatggtcc gaagaaagtg cgatcggtgg ccaccgtgga tttgacctaa acttaccggc 780

tgatcaagtc tcagtgacga cttcttaacg ttgactgagt ttgaggaaaa agtcaactat 840

caagcgaaga aagggttagt ggacggtgaa gattaacggt cgtttctttc cagttgcttc 900

ggtttgagct tgactgggtc tgtaatgaaa atgattggag tggacttggc attattatta 960

ttatttttaa aaagaaatgt taatttgttg ttggatttgt ttatagatag aggaaacaat 1020

tgggatacac aaatattttt ttttttaca aagaaaataa taatgcagag atggatgatt 1080

ggatcgtaca cgttattata tagtggacca ttctgtaatc gtgaattatt attatttgtt 1140

agaaatttaa ttttcgt 1157

<210> 35
<211> 245
<212> PRT
<213> Arabidopsis thaliana

<400> 35
Met Ala Leu Glu Thr Leu Asn Ser Pro Thr Ala Thr Thr Thr Ala Arg
1 5 10 15

Pro Leu Leu Arg Tyr Arg Glu Glu Met Glu Pro Glu Asn Leu Glu Gln
20 25 30

Trp Ala Lys Arg Lys Arg Thr Lys Arg Gln Arg Phe Asp His Gly His

35 40 45

Gln Asn Gln Glu Thr Asn Lys Asn Leu Pro Ser Glu Glu Glu Tyr Leu
50 55 60

Ala Leu Cys Leu Leu Met Leu Ala Arg Gly Ser Ala Val Gln Ser Pro
65 70 75 80

Pro Leu Pro Pro Leu Pro Ser Arg Ala Ser Pro Ser Asp His Arg Asp
85 90 95

Tyr Lys Cys Thr Val Cys Gly Lys Ser Phe Ser Ser Tyr Gln Ala Leu
100 105 110

Gly Gly His Lys Thr Ser His Arg Lys Pro Thr Asn Thr Ser Ile Thr
115 120 125

Ser Gly Asn Gln Glu Leu Ser Asn Asn Ser His Ser Asn Ser Gly Ser
130 135 140

Val Val Ile Asn Val Thr Val Asn Thr Gly Asn Gly Val Ser Gln Ser
145 150 155 160

Gly Lys Ile His Thr Cys Ser Ile Cys Phe Lys Ser Phe Ala Ser Gly
165 170 175

Gln Ala Leu Gly Gly His Lys Arg Cys His Tyr Asp Gly Gly Asn Asn
180 185 190

Gly Asn Gly Asn Gly Ser Ser Ser Asn Ser Val Glu Leu Val Ala Gly
195 200 205

Ser Asp Val Ser Asp Val Asp Asn Glu Arg Trp Ser Glu Glu Ser Ala
210 215 220

Ile Gly Gly His Arg Gly Phe Asp Leu Asn Leu Pro Ala Asp Gln Val
225 230 235 240

Ser Val Thr Thr Ser
245

<210> 36
<211> 1213
<212> DNA
<213> Oryza sativa

<400> 36
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cgaagcttag ctagcggata gaacaagtcg tcgatctgct tgctgctttt gtgaattgcg 120

gtggaagcat gtcgagcgcg tcgtccatgg aagcgctcca cgccgcggtg ctcaaggagg 180

agcagcagca gcacgaggtg gaggaggcga cggtcgtgac gagcagcagc gccacgagcg 240

gggaggaggg cggacacctg ccccaggggt gggcgaagcg gaagcggtcg cgccgccagc 300

gatcggagga ggagaacctc gcgctctgcc tcctcatgct cgcccgcggc ggccaccacc 360

gcgtccaggc gccgcctccg ctctcggctt cggcgccccc gccggcaggt gcggagttca 420

agtgctccgt ctgcggcaag tccttcagct cctaccaggc gctcggcggc cacaagacga 480

gccaccgggt caagctgccg actccgcccg cagctcccgt cttggctccc gcccccgtcg 540

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ccgacggcat gaccaacaga gtccacaggt gttccatctg ccagaaggag ttccccaccg 660

ggcaggcgct cggcgggcac aagaggaagc actacgacgg tggcgtaggc gccggcgccg 720

gcgcatcttc aaccgagctc ctggccacgg tggccgccga gtccgaggtg ggaagctccg 780

gcaacggcca gtccgccacc cgggcgttcg acctcaacct cccggccgtg ccggagttcg 840

tgtggcggcc gtgctccaag ggcaagaaga tgtgggacga ggaggaggag gtccagagcc 900

ccctcgcctt caagaagccc cggcttctca ccgcgtaatt cagcagctgc acggatccga 960

tccgtcagag tttttgtcta gggagtgaaa ttcagtcgaa acacactatt cgttgattcg 1020

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agccatacat acagtcatac agatataggt ctagctcttc cttggttctt tgtaacactg 1140

gaactgtacc tgtatctttt acactttgtt ctttgacagt catatattgt agaccaaaaa 1200

aaaaaaaaaa aaa 1213

<210> 37
<211> 269
<212> PRT
<213> Oryza sativa

<400> 37

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Met Ser Ser Ala Ser Ser Met Glu Ala Leu His Ala Ala Val Leu Lys
1               5                  10                  15

Glu Glu Gln Gln Gln His Glu Val Glu Glu Ala Thr Val Val Thr Ser
            20                  25                  30

Ser Ser Ala Thr Ser Gly Glu Glu Gly Gly His Leu Pro Gln Gly Trp
        35                  40                  45

Ala Lys Arg Lys Arg Ser Arg Arg Gln Arg Ser Glu Glu Glu Asn Leu
    50                  55                  60
```

Ala Leu Cys Leu Leu Met Leu Ala Arg Gly Gly His His Arg Val Gln
65 70 75 80

Ala Pro Pro Pro Leu Ser Ala Ser Ala Pro Pro Pro Ala Gly Ala Glu
85 90 95

Phe Lys Cys Ser Val Cys Gly Lys Ser Phe Ser Ser Tyr Gln Ala Leu
100 105 110

Gly Gly His Lys Thr Ser His Arg Val Lys Leu Pro Thr Pro Pro Ala
115 120 125

Ala Pro Val Leu Ala Pro Ala Pro Val Ala Ala Leu Leu Pro Ser Ala
130 135 140

Glu Asp Arg Glu Pro Ala Thr Ser Ser Thr Ala Ala Ser Ser Asp Gly
145 150 155 160

Met Thr Asn Arg Val His Arg Cys Ser Ile Cys Gln Lys Glu Phe Pro
165 170 175

Thr Gly Gln Ala Leu Gly Gly His Lys Arg Lys His Tyr Asp Gly Gly
180 185 190

Val Gly Ala Gly Ala Gly Ala Ser Ser Thr Glu Leu Leu Ala Thr Val
195 200 205

Ala Ala Glu Ser Glu Val Gly Ser Ser Gly Asn Gly Gln Ser Ala Thr
210 215 220

Arg Ala Phe Asp Leu Asn Leu Pro Ala Val Pro Glu Phe Val Trp Arg
225 230 235 240

Pro Cys Ser Lys Gly Lys Lys Met Trp Asp Glu Glu Glu Glu Val Gln
245 250 255

Ser Pro Leu Ala Phe Lys Lys Pro Arg Leu Leu Thr Ala
260 265

<210> 38
<211> 528
<212> DNA
<213> Arabidopsis thaliana

<400> 38
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ctaatgatgt tatctcgaag tttcgtggtc aaacaaatcg atgtaaagca atctaccgga 120

agcaaaacga accataataa ccacttcgaa tgcaaaacgt gtaaccggaa atttgattcc 180

ttccaagctc ttggaggtca tagagctagc cacaagaaac ctaagctgat cgttgaccaa 240

gaacaggtga agcatcgtaa caaagagaat gatatgcata agtgtacaat ttgcgatcaa 300

atgtttggga ccggtcaagc tctaggcggt cacatgagaa agcataggac gagcatgata 360

accgagcaat cgattgtccc ttctgtggtt tattccagac cggtttttaa tcgttgcagt 420

agcagcaagg agatcttgga cttaaatcta actccattgg aaaatgatct tgtgttaatc 480

tttgggaaga atttggttcc acaaattgat ttgaagtttg tgaattag 528

<210> 39
<211> 175
<212> PRT
<213> Arabidopsis thaliana

<400> 39

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Met Lys Arg Asp Arg Ser Asp Tyr Glu Glu Ser Met Lys His Ile Asp
1               5                  10                  15

Ile Val Glu Ser Leu Met Met Leu Ser Arg Ser Phe Val Val Lys Gln
            20                  25                  30

Ile Asp Val Lys Gln Ser Thr Gly Ser Lys Thr Asn His Asn Asn His
        35                  40                  45

Phe Glu Cys Lys Thr Cys Asn Arg Lys Phe Asp Ser Phe Gln Ala Leu
    50                  55                  60

Gly Gly His Arg Ala Ser His Lys Lys Pro Lys Leu Ile Val Asp Gln
65                  70                  75                  80

Glu Gln Val Lys His Arg Asn Lys Glu Asn Asp Met His Lys Cys Thr
                85                  90                  95

Ile Cys Asp Gln Met Phe Gly Thr Gly Gln Ala Leu Gly Gly His Met
            100                 105                 110

Arg Lys His Arg Thr Ser Met Ile Thr Glu Gln Ser Ile Val Pro Ser
        115                 120                 125

Val Val Tyr Ser Arg Pro Val Phe Asn Arg Cys Ser Ser Ser Lys Glu
    130                 135                 140

Ile Leu Asp Leu Asn Leu Thr Pro Leu Glu Asn Asp Leu Val Leu Ile
145                 150                 155                 160

Phe Gly Lys Asn Leu Val Pro Gln Ile Asp Leu Lys Phe Val Asn
                165                 170                 175
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<210> 40
<211> 820
<212> DNA
<213> Saccharum officinarum

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<223> a, c, t, g, unknown or other

<220>
<221> modified_base
<222> (581)..(582)
<223> a, c, t, g, unknown or other

<220>
<221> modified_base
<222> (589)..(589)
<223> a, c, t, g, unknown or other

<400> 40
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cccacgacga ctacgtctcc ctctgcctca tggcgctcgc agccgcggga ggcggaggcc 120

aagctggttt aacaacgcag tacgctctga acacggctgc ctggacagcg acggcgcaag 180

agtccgagct ccgcttccgg tgctccgtct gtggcaaggc cttcgcgtcg caccaggcac 240

tgggcgggca caaggccagc caccgcaagc cgacgctcgt acaggcacat gcgtcgtcct 300

cagccggagg cgcggcgtcg tcgtcggtaa caatgacctc ggccgtaggc agcagtgggc 360

aggggaggca caggtgcacg gtgtgccatc ggagcttcgc gacggngcaa gcgctcggcg 420

ggcacaagag gtgccattac tgggacgggc tctcggtgtc gctcaccgcg tcgtcggcgc 480

catcggggtc cgggtcgacc gtcaagggct ttgatctgaa tttggtgccg gtgccgcccg 540

cgatggccgc caacgctgcg acaaggtggg gagaggagaa nnaagtcana aacccttggc 600

ggtcaagaga aggcggcttg ccggtccgtc ttggacccta atttaacgat ttagaagtcc 660

ttttttttaat aattaagagt tcttttgaag aaggttgtaa agttttcgaa ccttgttctt 720

ttaatggatt tgggtgctgg cgaaatttta aaactggatt taaatttgcg ctcactcttt 780

ttttttattt tttacaccct ttttttttt tagaagaaga 820

<210> 41
<211> 1509
<212> DNA
<213> Arabidopsis thaliana

<400> 41
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cagactggtt caagtctaat ccttttcacc attaccctaa ttcctccact aacccctctc 120

ctcatcctct tcctcctgtt actcctccct cttccttctt cttcttccct caatccggag 180

acctccgccg tccaccgccg ccaccaactc ctcctccttc tcctcctctc cgagaagccc 240

tccctctcct cagcctcagc cccgccaaca aacaacaaga ccaccatcac aaccatgacc 300

accttattca agaaccacct tcaacctcca tggatgtcga ctacgatcat caccatcaag 360

atgatcatca taacctcgat gacgatgacc atgacgtcac cgttgctctt cacataggcc 420

ttccaagccc tagtgctcaa gagatggcct ctttgctcat gatgtcttct tcttcctctt 480

cctcgaggac cactcatcat cacgaggaca tgaatcacaa gaaagacctc gaccatgagt 540

acagccacgg agctgtcgga ggaggagaag atgacgatga agattcagtc ggcggagacg 600

gcggctgtag aatcagcaga ctcaacaagg gtcaatattg gatccctaca ccttctcaga 660

ttctcattgg ccctactcag ttctcatgtc ctgtttgctt caaaaccttc aacagataca 720

ataacatgca gatgcatatg tggggacatg gatcacaata cagaaaagga cctgaatctc 780

taaggggaac acaaccaaca ggaatgctaa ggcttccgtg ctattgctgc gccccaggct 840

gtcgcaacaa cattgaccat ccaagggcaa agcctctcaa agacttcaga acccttcaaa 900

cacattacaa gagaaaacat gggatcaaac ctttcatgtg taggaaatgt ggaaaggctt 960

tcgcagtccg aggggactgg agaacacatg agaagaattg tggcaaactt tggtattgca 1020

tatgtggatc tgatttcaag cacaagagat ctctcaaaga tcacatcaag gcttttggga 1080

atggtcatgg agcctacgga attgatgggt ttgatgaaga agatgagcct gcctctgagg 1140

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ttttgatgga ggtagggctt ttcaaactaa aagctatatc atctaattga tcataggaaa 1320

aaaatgaatc aagagcactt ggaaaatttt aaattgtatc tttagcttcc tagttaaatt 1380

tattgcaaga caatgtagca gtctaaccaa tgaggttccc aacggtttat ttctatttgt 1440

atattatttt gtcattagct tcacctttcg ttaattcgaa ggacataact tataaatgtt 1500

taaattatg 1509

<210> 42
<211> 383
<212> PRT
<213> Arabidopsis thaliana

<400> 42
Met Thr Asp Pro Tyr Ser Asn Phe Phe Thr Asp Trp Phe Lys Ser Asn
1 5 10 15

Pro Phe His His Tyr Pro Asn Ser Ser Thr Asn Pro Ser Pro His Pro
20 25 30

Leu Pro Pro Val Thr Pro Pro Ser Ser Phe Phe Phe Phe Pro Gln Ser
35 40 45

```
Gly Asp Leu Arg Arg Pro Pro Pro Pro Thr Pro Pro Pro Ser Pro
    50                  55                  60

Pro Leu Arg Glu Ala Leu Pro Leu Leu Ser Leu Ser Pro Ala Asn Lys
65                  70                  75                  80

Gln Gln Asp His His His Asn His Asp His Leu Ile Gln Glu Pro Pro
                85                  90                  95

Ser Thr Ser Met Asp Val Asp Tyr Asp His His His Gln Asp Asp His
            100                 105                 110

His Asn Leu Asp Asp Asp Asp His Asp Val Thr Val Ala Leu His Ile
        115                 120                 125

Gly Leu Pro Ser Pro Ser Ala Gln Glu Met Ala Ser Leu Leu Met Met
    130                 135                 140

Ser Ser Ser Ser Ser Ser Ser Arg Thr Thr His His His Glu Asp Met
145                 150                 155                 160

Asn His Lys Lys Asp Leu Asp His Glu Tyr Ser His Gly Ala Val Gly
                165                 170                 175

Gly Gly Glu Asp Asp Asp Glu Asp Ser Val Gly Gly Asp Gly Gly Cys
            180                 185                 190

Arg Ile Ser Arg Leu Asn Lys Gly Gln Tyr Trp Ile Pro Thr Pro Ser
        195                 200                 205

Gln Ile Leu Ile Gly Pro Thr Gln Phe Ser Cys Pro Val Cys Phe Lys
    210                 215                 220

Thr Phe Asn Arg Tyr Asn Asn Met Gln Met His Met Trp Gly His Gly
225                 230                 235                 240

Ser Gln Tyr Arg Lys Gly Pro Glu Ser Leu Arg Gly Thr Gln Pro Thr
                245                 250                 255

Gly Met Leu Arg Leu Pro Cys Tyr Cys Cys Ala Pro Gly Cys Arg Asn
            260                 265                 270

Asn Ile Asp His Pro Arg Ala Lys Pro Leu Lys Asp Phe Arg Thr Leu
        275                 280                 285

Gln Thr His Tyr Lys Arg Lys His Gly Ile Lys Pro Phe Met Cys Arg
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290 295 300

Lys Cys Gly Lys Ala Phe Ala Val Arg Gly Asp Trp Arg Thr His Glu
305 310 315 320

Lys Asn Cys Gly Lys Leu Trp Tyr Cys Ile Cys Gly Ser Asp Phe Lys
325 330 335

His Lys Arg Ser Leu Lys Asp His Ile Lys Ala Phe Gly Asn Gly His
340 345 350

Gly Ala Tyr Gly Ile Asp Gly Phe Asp Glu Glu Asp Glu Pro Ala Ser
355 360 365

Glu Val Glu Gln Leu Asp Asn Asp His Glu Ser Met Gln Ser Lys
370 375 380

<210> 43
<211> 1303
<212> DNA
<213> Arabidopsis thaliana

<400> 43
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atacggtgct tttattcttg atcttcttct tcttctttgt cttctcctca gagtcatgtc 120

taatccagct tgttcgaatc tcttcaacaa tggatgtgac cataatagct tcaactattc 180

cacttctctc tcttacattt acaactctca cggtagctac tattactcta ataccacaaa 240

ccctaattac attaatcata ctcataccac ttccacttcc cctaactcac ccccactaag 300

agaagctctt cctcttctta gcttaagccc cataaggcac caagaacaac aagaccaaca 360

ctatttcatg gacacccatc aaattagctc ttcaaacttt cttgatgatc ctcttgtgac 420

tgtggatctt catctagggt taccaaacta cggtgttggt gagagcatta ggagcaatat 480

tgctcctgat gcaaccacgg acgagcaaga tcaagatcat gaccgaggag tagaagtcac 540

agttgagtcc caccttgatg atgatgatga tcatcatgga gatctacaca gaggtcatca 600

ctattggatt cctactcctt ctcagatttt gattggtcct acacagttca cttgtcctct 660

ttgcttcaag acattcaaca gatacaacaa catgcagatg cacatgtggg gacacggctc 720

acaatacaga aagggaccag aatccttaag aggaacccaa ccaacaggaa tgctaagact 780

accatgtttc tgctgtgcac ccggttgcaa gaacaacatt gaccacccac gagccaagcc 840

tcttaaggac tttcgaaccc tccaaacaca ttacaaacgt aaacatgggt ctaaaccatt 900

tgcttgtcgt atgtgtggta aggcctttgc agtgaaagga gattggagaa cgcatgagaa 960

gaattgtgga aagctttggt attgctcttg tggctcggat tttaagcaca agaggtcgct 1020

taaggaccat gtcaaggcct ttggaaatgg tcatgttcct tgtgggattg atagttttgg 1080

aggagatcat gaggactact atgatgctgc ttctgatatc gagcaataag atgatagcaa 1140

caacaatgag tgttaattag gggttttgtt tatttttcct ctcatgcatt agttgattgt 1200

atgcacgtgt tctttagttt tgttcttcgg atctttgttt tattttgttt tgagctgttt 1260

ttttttttaat tactaagaag ttaattatca tctaaagatt ttc 1303

<210> 44
<211> 337
<212> PRT
<213> Arabidopsis thaliana

<400> 44

Met Ser Asn Pro Ala Cys Ser Asn Leu Phe Asn Asn Gly Cys Asp His
1 5 10 15

Asn Ser Phe Asn Tyr Ser Thr Ser Leu Ser Tyr Ile Tyr Asn Ser His
20 25 30

Gly Ser Tyr Tyr Tyr Ser Asn Thr Thr Asn Pro Asn Tyr Ile Asn His
35 40 45

Thr His Thr Thr Ser Thr Ser Pro Asn Ser Pro Pro Leu Arg Glu Ala
50 55 60

Leu Pro Leu Leu Ser Leu Ser Pro Ile Arg His Gln Glu Gln Gln Asp
65 70 75 80

Gln His Tyr Phe Met Asp Thr His Gln Ile Ser Ser Ser Asn Phe Leu
85 90 95

Asp Asp Pro Leu Val Thr Val Asp Leu His Leu Gly Leu Pro Asn Tyr
100 105 110

Gly Val Gly Glu Ser Ile Arg Ser Asn Ile Ala Pro Asp Ala Thr Thr
115 120 125

Asp Glu Gln Asp Gln Asp His Asp Arg Gly Val Glu Val Thr Val Glu
130 135 140

Ser His Leu Asp Asp Asp Asp Asp His His Gly Asp Leu His Arg Gly
145 150 155 160

His His Tyr Trp Ile Pro Thr Pro Ser Gln Ile Leu Ile Gly Pro Thr
165 170 175

Gln Phe Thr Cys Pro Leu Cys Phe Lys Thr Phe Asn Arg Tyr Asn Asn
180 185 190

```
Met Gln Met His Met Trp Gly His Gly Ser Gln Tyr Arg Lys Gly Pro
        195                 200                 205

Glu Ser Leu Arg Gly Thr Gln Pro Thr Gly Met Leu Arg Leu Pro Cys
    210                 215                 220

Phe Cys Cys Ala Pro Gly Cys Lys Asn Asn Ile Asp His Pro Arg Ala
225                 230                 235                 240

Lys Pro Leu Lys Asp Phe Arg Thr Leu Gln Thr His Tyr Lys Arg Lys
                245                 250                 255

His Gly Ser Lys Pro Phe Ala Cys Arg Met Cys Gly Lys Ala Phe Ala
            260                 265                 270

Val Lys Gly Asp Trp Arg Thr His Glu Lys Asn Cys Gly Lys Leu Trp
        275                 280                 285

Tyr Cys Ser Cys Gly Ser Asp Phe Lys His Lys Arg Ser Leu Lys Asp
    290                 295                 300

His Val Lys Ala Phe Gly Asn Gly His Val Pro Cys Gly Ile Asp Ser
305                 310                 315                 320

Phe Gly Gly Asp His Glu Asp Tyr Tyr Asp Ala Ala Ser Asp Ile Glu
                325                 330                 335

Gln
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<210> 45
<211> 495
<212> DNA
<213> Arabidopsis thaliana

<400> 45
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ttgttatcaa gagttggaga atgcggcgga ggaggagaga aacgagtttt ccgatgcaag 120

acttgtctta aagagttttc gtcgtttcaa gctttgggag gtcatcgtgc aagccacaag 180

aaactcatta acagtagcga tccatcactt cttggatcct tgtctaacaa gaaaactaaa 240

acggcgacgt ctcatccttg tccgatatgt ggcgtggagt ttccgatggg gcaagctctt 300

ggtggtcaca tgaggagaca taggagtgag aaagcctcac caggcacgtt ggttacacgt 360

tctttttttac cggagacgac gacggtgacg actttgaaaa aatcgagtag tgggaagaga 420

gtggcttgtt tggacttaga ttcgatggag agtttagtca attggaagtt ggagttggga 480

agaacgattt cttga 495

<210> 46
<211> 164
<212> PRT
<213> Arabidopsis thaliana

<400> 46
Met Val Ala Arg Ser Glu Glu Val Glu Ile Val Glu Asp Thr Ala Ala
1 5 10 15

Lys Cys Leu Met Leu Leu Ser Arg Val Gly Glu Cys Gly Gly Gly Gly
20 25 30

Glu Lys Arg Val Phe Arg Cys Lys Thr Cys Leu Lys Glu Phe Ser Ser
35 40 45

Phe Gln Ala Leu Gly Gly His Arg Ala Ser His Lys Lys Leu Ile Asn
50 55 60

Ser Ser Asp Pro Ser Leu Leu Gly Ser Leu Ser Asn Lys Lys Thr Lys
65 70 75 80

Thr Ala Thr Ser His Pro Cys Pro Ile Cys Gly Val Glu Phe Pro Met
85 90 95

Gly Gln Ala Leu Gly Gly His Met Arg Arg His Arg Ser Glu Lys Ala
100 105 110

Ser Pro Gly Thr Leu Val Thr Arg Ser Phe Leu Pro Glu Thr Thr Thr
115 120 125

Val Thr Thr Leu Lys Lys Ser Ser Ser Gly Lys Arg Val Ala Cys Leu
130 135 140

Asp Leu Asp Ser Met Glu Ser Leu Val Asn Trp Lys Leu Glu Leu Gly
145 150 155 160

Arg Thr Ile Ser

<210> 47
<211> 1209
<212> DNA
<213> Arabidopsis thaliana

<400> 47
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attactcggt cacagaaaga aacagaaaag tctacgaacc aacagcaaga tgttacttgt 120

tactatggtc taagggaaaa ctcgaagaag aaaacccagg aatctccgga accaatgaag 180

aagattttgt ttcgatgcga agaatgtgga aaagggtttc ggtacgagaa atattttaag 240

aatcatcgct cgatgatgca tttatcgccg aacgagaagg tttgtgaaga atccttgatg 300

actctgtctc gtagccttgg gtttgtgaag aagaagaaaa gatcaagact tggtaggtct 360

gggaagactt tatttactac gtttcttgaa ccgagttcta tttttgatgc gactgatgaa 420

gaattagaag tggcggattg tttgattcta ttgtctaaga gtgctcccaa ggttgtagac 480

gaattgaaaa gtctttctga ggcagtacgt gttactcctg aaacacctga aagtagctat 540

gatttgggtt gtttgctcaa caagaaaccg agaaaaggtg gtgaattgga atctggggtt 600

ttaagtaatg agcaaagact tatggaagaa gggtttagta gttatggaac atcgaaagaa 660

ccagctagct tcttgagaga cgaaaacaga ttggatcagc agaaacggag aaaagatggt 720

gaatttgaat ccggactttt gagtaatgag caaagactgc tagaagaaga gattactact 780

cctgtgacat tcaaaggtcc agcgagttcc ttgagacaca agtgtgcttt ggatcgaaat 840

ggaggtgaat ttggtcctga gtttttgagt aatgagcaaa cactgatgga agaaacatgg 900

aaagaaccag tgagtttctt agaagataag catgaatttg atcagcggaa aatgcgagaa 960

gctggcgact ttgaatctag gttttacaga attgagcttg gagtaggagc tatggagtgt 1020

acttcttcag atactgatat gctcacgcaa tctgataaga agaacgttga gcatcgatgc 1080

aggttgtgca acaagatatt ctcgtcttat caagctctag ggggtcatca gacgtttcat 1140

cggatgagca aatgtaagaa caagaagaat ggcatagagg aatcagttga acccaggatg 1200

actctgtga 1209

<210> 48
<211> 402
<212> PRT
<213> Arabidopsis thaliana

<400> 48
Met Glu Asp Glu His Gln Asp Leu His Lys Pro Ile Asn Gly Ala Leu
1 5 10 15

Arg Asp Leu Lys Ile Thr Arg Ser Gln Lys Glu Thr Glu Lys Ser Thr
20 25 30

Asn Gln Gln Gln Asp Val Thr Cys Tyr Tyr Gly Leu Arg Glu Asn Ser
35 40 45

Lys Lys Lys Thr Gln Glu Ser Pro Glu Pro Met Lys Lys Ile Leu Phe
50 55 60

Arg Cys Glu Glu Cys Gly Lys Gly Phe Arg Tyr Glu Lys Tyr Phe Lys

65 70 75 80

Asn His Arg Ser Met Met His Leu Ser Pro Asn Glu Lys Val Cys Glu
85 90 95

Glu Ser Leu Met Thr Leu Ser Arg Ser Leu Gly Phe Val Lys Lys Lys
100 105 110

Lys Arg Ser Arg Leu Gly Arg Ser Gly Lys Thr Leu Phe Thr Thr Phe
115 120 125

Leu Glu Pro Ser Ser Ile Phe Asp Ala Thr Asp Glu Glu Leu Glu Val
130 135 140

Ala Asp Cys Leu Ile Leu Leu Ser Lys Ser Ala Pro Lys Val Val Asp
145 150 155 160

Glu Leu Lys Ser Leu Ser Glu Ala Val Arg Val Thr Pro Glu Thr Pro
165 170 175

Glu Ser Ser Tyr Asp Leu Gly Cys Leu Leu Asn Lys Lys Pro Arg Lys
180 185 190

Gly Gly Glu Leu Glu Ser Gly Val Leu Ser Asn Glu Gln Arg Leu Met
195 200 205

Glu Glu Gly Phe Ser Ser Tyr Gly Thr Ser Lys Glu Pro Ala Ser Phe
210 215 220

Leu Arg Asp Glu Asn Arg Leu Asp Gln Gln Lys Arg Arg Lys Asp Gly
225 230 235 240

Glu Phe Glu Ser Gly Leu Leu Ser Asn Glu Gln Arg Leu Leu Glu Glu
245 250 255

Glu Ile Thr Thr Pro Val Thr Phe Lys Gly Pro Ala Ser Ser Leu Arg
260 265 270

His Lys Cys Ala Leu Asp Arg Asn Gly Gly Glu Phe Gly Pro Glu Phe
275 280 285

Leu Ser Asn Glu Gln Thr Leu Met Glu Glu Thr Trp Lys Glu Pro Val
290 295 300

Ser Phe Leu Glu Asp Lys His Glu Phe Asp Gln Arg Lys Met Arg Glu
305 310 315 320

Ala Gly Asp Phe Glu Ser Arg Phe Tyr Arg Ile Glu Leu Gly Val Gly
325 330 335

Ala Met Glu Cys Thr Ser Ser Asp Thr Asp Met Leu Thr Gln Ser Asp
340 345 350

Lys Lys Asn Val Glu His Arg Cys Arg Leu Cys Asn Lys Ile Phe Ser
355 360 365

Ser Tyr Gln Ala Leu Gly Gly His Gln Thr Phe His Arg Met Ser Lys
370 375 380

Cys Lys Asn Lys Lys Asn Gly Ile Glu Glu Ser Val Glu Pro Arg Met
385 390 395 400

Thr Leu

<210> 49
<211> 1087
<212> DNA
<213> Arabidopsis thaliana

<400> 49
cttgttagtt cactccacat aataaacacc aaagatttca ttctcttctc cataatttcg 60

aagtttcttg aattgggttt gtttcttgat ttgtttcttg aattgggttt tggtcttctt 120

ttcttactat atttggatat gatgatgggt caagatgagg ttgggagtga tcagacgcaa 180

atcataaaag ggaaacgtac gaagcgacaa agatcgtctt cgacgtttgt ggtgacggcg 240

gcgacaacag tgacttcaac aagttcatcg gccggtggaa gtggaggaga aagagctgtt 300

tcagatgaat acaactcggc ggtttcgtct ccggtgacta ctgattgtac gcaagaagaa 360

gaagacatgg cgatttgtct catcatgtta gctcgtggga cagttcttcc atcgccggat 420

ctcaagaact cgagaaaaat tcatcagaag atttcgtcgg agaattctag tttctatgtg 480

tacgagtgta aaacgtgtaa ccggacgttt tcgtcgttcc aagcacttgg tggacacaga 540

gcgagccaca agaagccgag gacgtcgact gaggaaaaga ctagactacc cctgacgcaa 600

cccaagtcta gtgcatcaga agaagggcaa aacagtcatt tcaaagtttc cggctcagcc 660

ctagcttcac aggcaagtaa catcatcaac aaggcaaaca aagtacacga gtgttccatc 720

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Ala Thr Thr Val Thr Ser Thr Ser Ser Ser Ala Gly Gly Ser Gly Gly
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Glu Arg Ala Val Ser Asp Glu Tyr Asn Ser Ala Val Ser Ser Pro Val
    50                  55                  60

Thr Thr Asp Cys Thr Gln Glu Glu Glu Asp Met Ala Ile Cys Leu Ile
65                  70                  75                  80

Met Leu Ala Arg Gly Thr Val Leu Pro Ser Pro Asp Leu Lys Asn Ser
                85                  90                  95

Arg Lys Ile His Gln Lys Ile Ser Ser Glu Asn Ser Ser Phe Tyr Val
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Tyr Glu Cys Lys Thr Cys Asn Arg Thr Phe Ser Ser Phe Gln Ala Leu
        115                 120                 125

Gly Gly His Arg Ala Ser His Lys Lys Pro Arg Thr Ser Thr Glu Glu
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Lys Thr Arg Leu Pro Leu Thr Gln Pro Lys Ser Ser Ala Ser Glu Glu
145                 150                 155                 160

Gly Gln Asn Ser His Phe Lys Val Ser Gly Ser Ala Leu Ala Ser Gln
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Ala Ser Asn Ile Ile Asn Lys Ala Asn Lys Val His Glu Cys Ser Ile
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Cys Gly Ser Glu Phe Thr Ser Gly Gln Ala Leu Gly Gly His Met Arg
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Glu Val Ser Arg Asn Ser Thr Glu Glu Glu Ile Glu Ile Asn Ile Gly
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